

REMARKS

I. Amendments

By this amendment, claims 14, 15 and 22 have been amended and claims 1-3, 5, and 8-10 have been cancelled.

No amendment of inventorship is necessitated by this amendment.

II. Request For Review of Previously Submitted Information Disclosure Statement

Applicants filed an Information Disclosure Statement of December 2, 1999. In a subsequent communication from the Examiner (Paper No. 8 mailed on November 2, 2000) the 1449 form was attached, but several of the references were lined through.

Applicants note that although most of the references were lined through in the Form 1449, the lined-through references were mostly cited by the Examiner on form PTO-892, forwarded to Applicants as part of Paper No. 8. Yet fourteen of the references which Applicants originally disclosed were lined through in the 1449 form, but not cited on PTO-892.

On February 2, 2001, Applicants submitted copies of these references to the Examiner for a second time. However, these references were not acknowledged by the Examiner in a subsequent Office Action summary. The Examiner has indicated that the references were not received, although for both the original submission of the documents as well as the second submission of copies, Applicants have a stamped postcard indicating receipt of the references by the US Patent and Trademark Office.

Copies of fourteen references which have not yet successfully been received by the Examiner accompany this response, for her review in attached Appendix B. This marks the third time that Applicants will have forwarded these references. If these references do not reach the Examiner, Applicants respectfully request that the Examiner contact the Applicants' Attorney immediately so that personal delivery can be arranged.

The originally filed 1449 accompanies this response as Appendix A. Applicants have lined through all of the references which the Examiner has already considered, for the Examiner's convenience.

Applicants respectfully request a review of the pending claims in light of the fourteen references, and that the Examiner return an initialed copy of the Form 1449 in attached Appendix A, if appropriate. To assist the Examiner with her analysis, attached Appendix C provides the structures for the compounds recited in claims 13 and 24. Claim 24 had previously been indicated as allowable, yet Applicants request that the claim be reconsidered and found allowable over the fourteen references as well.

III. Discussion of the Rejection of Claims 1-3, 5, 8-15 and 22 under 35 U.S.C. Sec. 112, First Paragraph

Claims 1-3, 5, 8-15 and 22 have been rejected under 35 U.S.C. Sec. 112, first paragraph. The Examiner stated that the specification does not reasonably provide enablement for R⁴ being other than moieties indicated on pages 103-105 and R³ being other than phenyl substituted with the groups delineated on pages 103-105. The Examiner has also further stated that the specification does not enable R³ equal to phenyl substituted with two or more electron withdrawing groups in the ortho position or R⁴ equal to C₁₋₄ alkyl groups substituted with phenyl or pyridyl which is optionally substituted with two or more electron withdrawing groups in the ortho position. Applicants respectfully traverse the rejection.

As an initial matter, Applicants note that they have cancelled claims 1-3, 5 and 8-10 by this amendment. Of the remaining pending claims which have been classified under this rejection, claims 11, 12 and 13 are each independent composition of matter claims. Of those claims, claim 13 recites three specific compounds and their salts. Claims 14, 15 and 22 have been made dependent on claim 11 by this amendment.

A. Enablement for Y

Applicants emphasize once again the Examiner's comments with respect to the lack of enablement of Y are completely erroneous.

In independent claim 11, Y is oxygen. In fact Y was limited to oxygen in claim 11 as originally filed.

In independent claim 12, Y is not variable.

In independent claim 13, Y is not variable.

However, at the bottom of page 3 and at the top of page 4 of the Office Action, the Examiner has made references to Y which do not seem to acknowledge the status of the pending U.S. Patent Application Serial No. 09/445,193

claims with respect to Y. Applicants assert that Y is enabled, and also that the only reason that the Examiner has for the lack of enablement of Y is not based on the pending claims.

B. Enablement for R³

In light of the Applicants' previously submitted evidence for the enablement of R³, it appears that the Examiner has modified this aspect of the rejection, now maintaining that "the Applicant does not enable R³ equal to phenyl substituted with two or more electron withdrawing groups in the ortho position". In response, Applicants assert that the specification provides sufficient detail to enable one skilled in the art to make the recited compounds.

Of the remaining pending compounds to which this statement could be applied, Applicants make the following observations. In independent compound claim 11, R³ is limited to a phenyl optionally substituted by certain substituents. In independent claim 12, R³ is also limited to a phenyl optionally substituted by certain substituents. In independent compound claim 13, R³ is not recited.

A detailed description of appropriate substituents for R³ is found on page 33, line 21 – page 36, line 11 of the specification. Production methods for compounds representative of the invention as set forth in independent claims 11 and 12 are described in detail on page 49, line 31 – page 60, line 31. Therefore, the specification provides adequate information for one skilled in the art to make compounds containing optionally substituted phenyl groups for R³.

More particularly, variability for R³ can be incorporated according to EP A 273 647, one of the references cited on page 54, lines 20-21 of the specification. Applicants have enclosed a schematic as attached Appendix D which summarizes the synthetic technique which allows introduction of variability at R³. In the scheme, R⁵ corresponds to Applicants' R³. Applicants assert that R³ as recited in claims 11 and 12 is not so broad as to be unenabled.

Claims 14, 15 and 22 depend upon claim 11. Applicants submit that these more specific dependent claims are also enabled for the reason provided above.

As stated above, claim 13 does not recite R³.

Therefore, the pending claims are enabled with respect to R³.

C. Enablement for R⁴

As above, in light of the Applicants' previously submitted evidence for the enablement of R³, it appears that the Examiner has modified this aspect of the rejection, now maintaining that "R⁴ equal to C₁₋₄ alkyl groups substituted with phenyl or pyridyl which is optionally substituted with 2 or more electron withdrawing groups in the ortho position" is not enabled.

Of the remaining pending compounds to which this statement could be applied, Applicants make the following observations. In independent compound claim 11, R⁴ is limited to a C₁₋₆ alkyl substituted by phenyl or pyridyl or an acyl group. In independent claim 12, R³ is also limited to a phenyl optionally substituted by certain substituents. In independent compound claim 13, R⁴ is not recited.

The compounds as set forth in independent claims 11 and 12 can be prepared by one skilled in the art pursuant to conventional Process 1, depicted on page 50 of the specification. A large variety of compounds of formula III of Process 1 can be used to insert various R⁴ substituents onto the compound. Applicants are confident that their specification enables the scope of the claims with respect to R⁴.

Claims 14, 15 and 22 depend upon claim 11. Applicants submit that these more specific dependent claims are also enabled for the reason provided above.

As stated above, claim 13 does not recite R⁴.

Therefore, the pending claims are enabled with respect to R⁴.

For the detailed reasons provided above, Applicants believe that their invention as set forth in the present claims as amended is fully enabled by the specification. Therefore, Applicants respectfully request withdrawal of the Sec. 112, first paragraph rejection.

IV. Discussion of the Rejection of Claims 26 and 28 under 35 U.S.C. 112, First Paragraph

Claims 26 and 28 have been rejected under 35 U.S.C. Sec. 112, first paragraph for allegedly lacking enablement. Applicants do not understand the logical reasoning for this rejection, as explained below.

In Section 2 of the Office Action, the Examiner has made references to several different diseases such as Parkinson's and Huntington's chorea at the bottom of page 4 and at the top of U.S. Patent Application Serial No. 09/445,193

page 5 of the Office Action. Applicants do not understand why such comments have been included, as dependent method claims 26 and 28 are limited to a single disease (Alzheimer's) by virtue of a previous amendment.

Moreover, the Examiner's comments still include references to Y, R⁴ and R³ which are inappropriate at the bottom of page 5 and in the middle of page 6 of the Office Action. By this amendment, Applicant has made method claim 22 dependent upon compound claim 11. Claim 28 thus ultimately depends upon claim 11. Applicants believe that claim 11 is sufficiently limited so as to be enabled by the specification, as explained in Sec. III above. For the Examiner's edification, Applicants note that in claim 11, Y is limited to oxygen, R³ is limited to optionally substituted phenyl groups and R⁴ is either C₁₋₆ substituted alkyl or optionally substituted acyl.

Claim 26 depends upon method claim 25. Applicants believe that claim 25 is sufficiently limited so as to be enabled by the specification, as explained in Sec. V below; and consequently assert that claim 26 is also adequately enabled. For the Examiner's edification, Applicants note that in claim 25, Y is limited to oxygen, R³ is an optionally substituted phenyl group and R⁴ is a substituted aliphatic hydrocarbon group.

Applicants respectfully request withdrawal of the Sec. 112, first paragraph rejection of claims 26 and 28.

V. Discussion of Rejection of Claim 25 under 35 U.S.C. Sec. 112, First Paragraph

Claim 25 has been rejected under 35 U.S.C. Sec. 112, first paragraph as allegedly unenabled (1) for R¹ and R² when the substituents are combined to form a ring and (2) R³, R⁴ and Y encompassing broader Markush groups. Applicants will discuss each aspect of the rejection separately below.

In a previous amendment, claim 25 had been limited to R¹ and R² of acyclic hydrocarbon groups or cycloalkyl groups. The option of R¹ and R² coming together to form a ring was previously eliminated. For this reason, the Examiner's statement that the rejection has been applied "because the specification, does not provide enablement for R¹ and R² of the compound of formula I coming together to form all heterocyclic unsubstituted or substituted rings" is simply incorrect.

The Examiner has also expressed a concern about the breadth of the options for Y, R³ and R⁴. However, Y was previously limited to an oxygen atom, R³ was previously limited to substituted or unsubstituted phenyl groups and R⁴ was previously limited to further substituted aliphatic hydrocarbon groups.

The Examiner did not appear to take the amendment of claim 25 submitted by Applicants in their communication of September 24, 2002 into account before copying a set of prior remarks from a prior Office Action's rejection to create the current rejection. Applicants respectfully request a careful consideration of claim 25, as it is currently pending with respect to enablement issues. If the rejection is to be maintained, Applicants respectfully request that comments be crafted which are specific to the currently pending claim 25.

Therefore Applicants respectfully request withdrawal of the 35 U.S.C. Sec. 112, first paragraph rejection of claim 25.

VI. Conclusion

Reconsideration of the claims as amended and allowance is requested.

Should the Examiner believe that a conference with Applicants' attorney would advance prosecution of this application, she is respectfully requested to call Applicants' attorney at (847) 383-3391.

Respectfully submitted,

Dated: May 7, 2003

(847) 383-3391

(847) 383-3372

Elaine M. Ramesh
Elaine M. Ramesh, Ph.D., Reg. No. 43,032
Mark Chao, Ph.D., Reg. No. 37,293

Attorney for Applicants
Customer No. 23115

Takeda Pharmaceuticals North America, Inc.
Intellectual Property Department
Suite 500, 475 Half Day Road
Lincolnshire, IL 60069 USA



Certificate of Mailing under 37 CFR 1.10

The undersigned hereby certifies that this document, along with any attachments, is being deposited in an envelope addressed to The Commissioner of Patents and Trademarks, with sufficient postage with the United States Postal Service EXPRESS MAIL Post Office to Addressee Service on this date May 9, 2003

Express Mail Label No. EV 193987048 US

Gail L. Winokur

Printed Name: Gail L. Winokur